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Jurgen Jean Louis Hoppenbrouwers

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BRIARCLIFF MANOR, NY 10510

EXAMINER

SHARIFI-TAFRESHI, KOOSHA

ART UNIT

PAPER NUMBER

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/598,581	Applicant(s) HOPPENBROUWERS ET AL.	
	Examiner Koosha Sharifi	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 9-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,13 and 14 is/are rejected.
- 7) ☒ Claim(s) 3-8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-8, 13 and 14 directed towards species 1 in the reply filed on 06/01/2009 is acknowledged.
2. Claims 9-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 06/01/2009.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "...the means (*LD*) for determining a load..." of claims 1 and 13, and "...determining (*LD*)..." of claim 14 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

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changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, **apart from any other text**.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by

[Kurumisawa, Takashi, US 20030112231 A1]

Regarding claim 1:

Kurumisawa discloses:

An active matrix display **[Kurumisawa: Fig.1]** comprising
a select driver (SD) **[Kurumisawa: Fig.1: Y DRIVER 150]** for driving select electrodes (SE) **[Kurumisawa: Fig.1: Y1, Y2, ..., Y120]** ,
a data driver (DD) **[Kurumisawa: Fig.1: X DRIVER 160]** for supplying data (D) **[Kurumisawa: Fig.2:Inherent from data lines X 1420]** to data electrodes (DE) **[Kurumisawa: Fig.1: X1, X2, ..., X160]**,
a power supply (PS) **[Kurumisawa: Fig.1: POWER SUPPLY CIRCUIT 130]** for supplying a power supply voltage (VB) **[Kurumisawa: Fig.1: Vdd]**,
at least one power supply electrode (PE) **[Kurumisawa: Fig.2: Vdd]** for supplying the power supply voltage (VB) **[Kurumisawa: Fig.2: Vdd]** to pixel driving circuits (PD) **[Kurumisawa: Fig.2: 1400]** of at least one line of pixels (10) **[Kurumisawa: Fig.2: Xj]** extending in a same direction as the select electrodes (SE) and/or in a same direction as the data electrodes (DE) **[Kurumisawa: Fig.2 Xj]**,
the pixels (10) **[Kurumisawa: Fig.2]** being associated with intersections of the data electrodes (DE) **[Kurumisawa: Fig.2: X]** and the select electrodes (SE) **[Kurumisawa: Fig.2: Y]**, the pixels (10) comprising a light emitting element(L) **[Kurumisawa: Fig.2: 1450]**, and a pixel driving circuit (PD) **[Kurumisawa: Fig.2: 1400]** for receiving the power supply voltage (VB) **[Kurumisawa: Fig.2: Vdd]** via the at least one power supply electrode (PE) **[Kurumisawa: Fig.2: Vdd]** and data (D) **[Kurumisawa: Fig.2:Inherent from data lines X 1420]** via the data electrodes (DE) **[Kurumisawa: Fig.2: X]** to control a brightness of the light emitting element (L) **[Kurumisawa: Paragraph 0042;**

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Also inherent],

means (LD) for determining a load (AL; MA; IL) [Kurumisawa: Paragraph: 0008: “The power supply circuit includes a calculation circuit to calculate the total number of pixels that are turned on in the display panel...”; Fig.2: 1400 corresponds to Applicant’s load; Examiner: Note that Kurumisawa’s pixel can be broadly interpreted to correspond to Applicant’s load, in other words a pixel is a type of load] on the at least one power supply electrode (PE) [Kurumisawa: Fig.2: Vdd] , and means (CO) for controlling [Kurumisawa: Fig.1: 130] a level of the power supply voltage (VB) [Kurumisawa: Fig.1: 130: Vdd] depending on the load (AL; MA; IL) determined [Kurumisawa: Paragraph 0070; Fig.1: RD].

Regarding claim 2:

An active matrix display as discussed above, wherein the means (CO) for controlling the level of the power supply voltage (VB) are arranged for increasing the level of the power supply voltage (VB) if a level of the load (AL; MA; IL) increases [Kurumisawa: Paragraph 0133: Examiner: Note that a decrease in the impedance would result in a lower voltage drop meaning that the actual received power supply (Vdd) is increased.].

Regarding claim 13:

The limitations of claim 13 have been addressed in the rejection of claim 1 above.

Regarding claim 14:

The limitations of claim 14 have been addressed in the rejection of claim 1 above.

Allowable Subject Matter

2. Claims are 3-8 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

3. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 3:

The prior art does not teach or suggest:

“An active matrix display as discussed above, wherein the load (AL; MA; IL) is an image load indicating a ratio of the summed grey level of the pixels (10) associated with the at least one line of pixels (10) generating light and the maximum grey level of one of the pixels (10) multiplied by a total number of the pixels (10) associated with the at least one line of pixels (10)”.

Regarding claim 4:

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The prior art does not teach or suggest:

“An active matrix display as discussed above, wherein the at least one power supply electrode (PE) comprises a plurality of power supply electrodes (PE) extending in the direction of the data electrodes (DE), the power supply voltage (VB) being supplied to all power supply electrodes (PE), *and the means (LD) for determining the load (AL; MA; IL) comprises means (LL) for determining actual loads (AL), one for each one of the power supply electrodes (PE), and means (DMV) for determining the highest one of the actual loads (MA), and wherein the means (CO) for controlling is arranged for controlling the power supply voltage (VB) to a level accommodating the highest one of the actual loads (MA)*”.

Regarding claim 5:

The prior art does not teach or suggest:

“An active matrix display as discussed above, wherein the at least one power supply electrode (PE) comprises a plurality of power supply electrodes (PE) extending in the direction of the select electrodes (SE), the power supply voltage (VB) being supplied to all power supply electrodes (PE), *and the means (LD) for determining the load comprises means (LL) for determining actual loads (AL), one for each one of the power supply electrodes (PE), and means (DMV) for determining the highest one of the actual loads (MA), and wherein the means (CO) for controlling is arranged for controlling the power supply voltage (VB) to a level accommodating the highest one of the actual loads (MA)*”.

Regarding claim 6:

The prior art does not teach or suggest:

“An active matrix display as discussed above, wherein the power supply (PS) is arranged for supplying a plurality of power supply voltages (VB1, VB2, VB3) to an associated plurality of groups of the at least one power supply electrode (PE1, PE2, PE3), *the means for determining (LD) the load (AL) comprises means (LL) for determining the load (AL1, AL2, AL3) on each one of the plurality groups of the at least one power supply electrode (PE1, PE2, PE3), and the means (CO) for controlling being arranged for controlling a level of each one of the power supply voltages (VB1, VB2, VB3) in dependence on the associated load (AL1, AL2, AL3)*”.

Regarding claims 7 and 8:

Claims 7 and 8 depend on claim 6 and are found allowable for at least the same reason as discussed above.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

[Numao, Takaji, US 20030011314 A1] discloses: Power supply line connected to the pixel circuit. See Fig.2 (E).

[Abe, Naoto et al., US 20030122759 A1] discloses: A compensation circuit which compensates for fluctuation of display luminance due to voltage drop caused by resistance of the row wiring. See abstract.

[Akimoto, Hajime et al., US 20040004591 A1] discloses: Power lines between input terminals for signal lines. Keeps voltage drop to a minimum. See paragraph 0044.

[Sanford; James Lawrence et al. US 6734636 B2] discloses: Eliminating voltage drop.

[Devos, Bruno et al., US 20050017922 A1] discloses: Power supply is compensation is supplied, voltage drop is measured. See abstract.

[Routley; Paul R. et al., US 20060001613 A1] discloses: Constant current sources.

Other Suggestions For Assisting The Examiner

- The examiner requests, in response to this Office action, support to be shown for language added to any original claims on amendment and any new claims. That is, indicate support for newly added claim language by specifically pointing to page(s) and line number(s) in the specification and/or drawing(s). This will assist the examiner in prosecuting the application.

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- The examiner requests, in response to this Office action, for applicant to provide in an appendix a separate sheet next to the amendment of claims sheet that only shows the amended claims (subject matter applicant is claiming) without any strikethroughs or underlines. That is, remove any text or words which are stroked through or cancelled (cancelled words) and remove the underlining of added text or words (added words). This will expedite the prosecution of the application.
- The examiner requests, in response to this Office action, to provide in an appendix a separate sheet next to the drawings sheet which provides in summary what the reference numbers per figure of the drawing stand for. For e.g. provide a list where on the left side the reference numbers stand and on the right side, in a one to one correspondence, the name as used in the disclosure or claim language stands. For e.g.:
 - For Fig.1:
 - 100 – Display
 - 101 – Remote
 - ...
 - For Fig.2:
 - 200 – Timing controller
 - 201 – Sensor
 -

This will expedite the prosecution of the application.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Koosha Sharifi whose telephone number is (571) 270-5897. The examiner can normally be reached on Mon - Fri / 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on (571) 272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Koosha Sharifi
Examiner
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/K. S./
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